

Remarks

Claims 1-10, 13-14, 16-17, and 80-94 were pending in the application. By this paper, Applicants have cancelled claims 5, 13, 87 and 90 and added new claims 96-99. Thus, claims 1-4, 6-10, 14, 16-17, 80-86, 88-89, 91-94 and 96-99 are currently pending. No new matter has been added by the present amendment. Applicants respectfully request reconsideration of the above-identified application in view of the present amendment and the following remarks.

The present invention is directed at providing an improved cleaning composition for cleaning metal surfaces, such as aluminum and aluminum-containing alloys. As set forth in the background, containers are typically made of aluminum and alloys thereof and, as a result of their forming operation, often contain lubricants, forming oils and residual aluminum fines on the metal surfaces. The present invention is directed at providing a cleaning composition for these types of materials. Thus, the cleaning composition of the present application is particularly useful for cleaning aluminum and aluminum alloy materials (as well as other metals) to remove and dissolve (aluminum) fines and for cleaning lubricating oils from the metal.

Claims 1-10, 13-14, 16-17, 80-94 have been rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,214,777 to Li et al., hereinafter *Li*. Applicants respectfully traverse this rejection.

Claim 1 recites a cleaning composition for formed metal articles, the cleaning composition comprising water and:

A) an ethoxylate of an alcohol present in an amount from about 0.1 to 3 g/l, the alcohol having Formula I:



wherein R_1 is a saturated or unsaturated, straight-chain or branched alkyl having from 12 to 80 carbon atoms and the ethoxylate is a 20 to 80 mole ethoxylate;

B) an inorganic pH adjusting component present in an amount such that the pH of the cleaning composition is less than 2; and

C) at least one nonionic surfactant that is different than component A present in an amount from about 0.1 to about 3 g/l, wherein the cleaning composition has an average water-break-free percent reduction of less than 50% after 7 days aging.

The prior art does not disclose, teach or suggest the claimed invention. To begin with, *Li* is not a proper reference. It is non-analogous to the claimed invention. *Li* discloses a lubricant composition, which contrary to a cleaning composition, is to remain on the metal material to provide a lubricating effect. It is not removed to provide a cleaning effect. Moreover, the lubricant composition of *Li* is used during the conveying and filling of the containers. *Li*'s composition is being used as the containers are being filled. In contrast, the present invention is used to clean metallic articles, such as containers, during container formation. Thus, the claimed composition is for use prior to the metal being filled or used for its intended purposes. *Li*'s composition is used for a different purpose, is used differently, and is used at a totally different phase of the bottling process.

Moreover, *Li* discloses a composition having a pH of 3 to 9.5. Notably, claim 1 recites that the pH of the cleaning composition is less than 2. Applicants take exception with the Patent Office's statement that "with respect to the pH of the composition, as the 'word' about permits some tolerance, the lower pH limit of about 3 may be considered to read on pH less than 2." A pH of less than 2 renders the composition quite acidic. In setting the pH range of 3 to 9.5, as *Li* does, *Li* is purposely avoiding the various acidic pH of 2 and less. While the term "about" does provide some tolerance, it is unreasonable to assume that such a tolerance would allow reading a pH of less than 2, which is 10 times more acidic than the pH of 3 of *Li*. pH is on a logarithmic scale. As a result, each whole pH value below 7 is ten times more acidic than the next higher value.

Moreover, the Patent Office acknowledges the "water-break-free" limitation is not disclosed, taught or suggested in *Li*, but states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to reasonably expect the composition of *Li* to have similar water-break-free percent reductions as those recited because similar ingredients have

been utilized. (Emphasis added.) Applicants take exception of this statement. As set forth above, the present invention is directed at providing a cleaning composition wherein the composition of *Li* is directed at providing a lubricant. These usages are for entirely different purposes and at entirely different stages of the container utilization process. As set forth above, the composition of the present invention is used prior to the filling operation such that when the container is filled, it will be sufficiently clean. Whereas, the composition of *Li* is used during the filling operation after it has already been cleaned. Moreover, these compositions cannot be considered to be substantially similar. *Li* includes a quarternary phosphonium compound as its primary ingredient. Such a component is not found in Applicants' composition. Accordingly, Applicants respectfully disagree with this statement from the Patent Office.

Moreover, Applicants take exception with the Patent Office's statement on page 4 of the Office Action that:

[I]t would have been obvious to one of ordinary skill in the art at the time the invention was made to have prepared a composition comprising a combination of nonionic surfactants in their optimum proportions wherein one contains a 40 mole ethoxy group, and another with a lower ethoxy group because it is taught by *Li* at column 7, lines 52-53 that one or more surfactants may be used, and to optimize the ethylene oxide and alky groups of the nonionic surfactants because it has been held to be obvious to select a value in a known range by optimization for the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. (Emphasis added.)

To begin with, *Li* in stating that "one or more surfactants may be used" in no way shape or form makes it obvious to provide a combination of nonionic surfactants in their optimum proportions wherein one contains a 40 mole ethoxy group and the other with a lower ethoxy group. There is no teaching in *Li* to provide such an "optimum combination." *Li* makes a broad statement that "one or more than surfactants may be used" and the Patent Office jumps to the conclusion that this statement would lead one of ordinary skill in the art at the time of

Applicants' invention to select the claimed components in the claimed proportions. *Li's* invention has nothing to do with providing Applicants' type of composition and even if it did, this does not amount to optimization of results effective variables. The listing of multiple surfactants that can be used in a lubricant does not give rise to optimization of a results effective variable. A result effective variable only is a variable (parameter) that has been found to achieve a recognized result. However, such a parameter has not been identified by *Li*. And the compositions have different purposes and uses. Applicants' invention is directed at providing a cleaning composition, not at lubricating cans. Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 103 rejection of *Li*.

Claims 1-5, 7-10, 13-14, 16-17, 80-85 and 87-94 have been rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,462,697 to Yianakopoulos, hereinafter *Yianakopoulos*. Applicants respectfully traverse this rejection.

Yianakopoulos is non-analogous art. *Yianakopoulos* teaches a cleaning composition for hard surfaces, such as painted woodwork and panels, tiled walls, wash bowls, bathtubs, linoleum or tile floors, and washable wallpaper. None of these surfaces are metallic let alone aluminum or aluminum alloys.

Moreover, *Yianakopoulos* does not disclose, teach or suggest a cleaning composition comprising an ethoxylate of an alcohol having 12 to 80 carbon atoms and 20 to 80 mole ethoxylate and another nonionic surfactant different from the first. However, the Patent Office states that it would have been obvious since *Yianakopoulos* teaches at least one nonionic surfactant and to have selected the portion of the prior art's range which is within the range of Applicants' claims would have been obvious because it is a known range of optimization for the best results. Again, *Yianakopoulos* makes a broad statement and the Patent Office is failing to appreciate Applicants' invention. Applicants' invention is a specific composition which provides a desired result as a cleaning composition for formed metal articles. With respect to providing unexpected results, the Patent Office is invited to peruse the examples wherein the benefit and the unexpected results of the invention are shown. Furthermore, again this is not a result

effective variable and thus the Patent Office's rationale does not apply. As the examples show, the cleaner composition for metal surfaces is an unpredictable art. The results show that Applicants, who are quite skilled in the can cleaner art, did not find predictability in achieving the combination of features sought, specifically, water break free, not too much foam, and little re-deposition of the soil on the cans.

With respect to difference (2) which is the fact that *Yianakopoulos* fails to exhibit a water-break-free percent reduction as claimed, Applicants contend that it would not be obvious that *Yianakopoulos* composition would have such a water-break-free percent reduction since they are directed at entirely different usages and have very different compositions.

With respect to differences (4), (5) and (6), the Patent Office has failed to meet its obligation of providing an explanation as to why such differences between the prior art and the claimed invention would have been obvious. The Patent Office is just making assertions and does not provide any supporting rationale to support its conclusion.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 103 rejection of the claims over *Yianakopoulos*.

Claims 96-99 have added. These claims are not disclosed, taught or suggested in the prior art. For instance, claims 98 and 99 are "consisting essentially of" claims. Both *Li* and *Yianakopoulos* have components that are not present in those claims. As set forth above, *Li* discloses a lubrication composition having quaternary phosphonium compounds. This compound would clearly change the basic and novel properties of the claimed cleaning composition. *Yianakopoulos* discloses a cleaning composition for enamel surfaces having anti-corrosive agents to prevent attack on enamel surfaces. This agent would clearly change the basic and novel properties of the claimed cleaning composition.

Applicants submit that the claims are in a condition for allowance and respectfully request a notice to that effect. If the Examiner believes that discussion or a claim

amendments of a minor nature would advance the prosecution of the application, the Examiner is highly encouraged to telephone the Applicants' attorney at the number given below.

The one month Petition fee of \$130 is being charged to Deposit Account No. 02-3978 via electronic authorization submitted concurrently herewith. The Commissioner is hereby authorized to charge any additional fees or credit any overpayments as a result of the filing of this paper to Deposit Account No. 02-3978.

Respectfully submitted,
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Date: August 24, 2009

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